

551.506 (261.1) WEATHER OF NORTH AMERICA AND ADJACENT OCEANS.

NORTH ATLANTIC OCEAN.

By F. A. YOUNG.

The average pressure for the month varied considerably, as compared with the normal, at a number of land stations on the coast and islands of the North Atlantic. In the following table the average sea-level pressure is for 8 a. m., 75th meridian time, while the departures are only approximate, as the normals were taken from the Pilot Chart, and are based on Greenwich mean noon observations, or 7 a. m., 75th meridian time.

Station.	Average pressure.	Departure.
	<i>Inches.</i>	<i>Inches.</i>
St. Johns, Newfoundland.....	29.84	-0.06
Nantucket.....	30.11	+0.01
Hatteras.....	30.23	+0.10
Key West.....	30.11	+0.01
New Orleans.....	30.24	+0.13
Swan Island.....	29.95	-0.03
Turks Island.....	30.15	+0.10
Bermuda.....	30.29	+0.15
Horta, Azores.....	30.10	+0.04
Lerwick, Shetland Islands.....	29.78	+0.08
Valencia, Ireland.....	29.78	-0.12
London.....	29.97	-0.03

January is ordinarily the stormiest month of the year over the North Atlantic; taking the ocean as a whole, the number of days with winds of gale force during the month under discussion greatly exceeded the normal as shown on the Pilot Chart, and January, 1924, will be long remembered in maritime circles, on account of the large number of unusually severe gales. There was not a day during the month when heavy winds were not reported from some section of the ocean, and not only were the steamer lanes swept by cyclonic disturbances in quick succession, but on a number of days the storm area extended as far south as the Azores or Bermudas, while two exceptionally severe "northers" were reported from the Gulf of Mexico.

Over the greater part of the ocean the number of days with fog was apparently somewhat below normal, although it was observed on from 7 to 9 days over the Grand Banks and on 3 days in the Gulf of Mexico. It was comparatively rare over the steamer lanes.

On the 1st Father Point, Quebec, was near the center of a Low that moved rapidly eastward, and on the 3d was central near latitude 52° N., longitude 38° W. On the 2d and 3d heavy winds prevailed over the greater part of the ocean, north of the 40th parallel, and on the 2d moderate gales were also reported from the vicinity of the Bermudas. Storm log:

British S. S. *Varentia*:

Gale began on the 1st, wind SW. Lowest barometer 29.70 inches at noon on the 2d, wind SW., 12, in latitude 47° N., longitude 38° 50' W. End on the 2d, wind NW. Highest force of wind 12, SW.; shifts SW.-NW.

On the 4th Newfoundland was covered by a Low that moved rapidly eastward, and was responsible for one of the most severe disturbances of the month. Charts VIII to XI cover the period from the 5th to 8th, inclusive, and an examination of these charts will give an idea of the unusual conditions that prevailed over the ocean and also show the "norther" of the 5th and 6th in the Gulf of Mexico. Storm logs:

Dutch S. S. *Boschdijk*:

Gale began on the 4th, wind SW. Lowest barometer 29.18 inches. At 10 a. m. on the 4th wind W., 9, in latitude 47° 43' N., longitude 36° 48' W. End on the 6th, wind NW. Highest force of wind 10 WNW.; shifts not given.

American S. S. *East Side*:

Gale began on the 6th, wind W. 7. Lowest barometer 29.58 inches at 3 a. m. on the 6th, wind W. 7, in latitude 41° 10' N., longitude 66° 20' W. End at 7 p. m. on the 6th, wind N. Highest force of wind 11, W.; shifts E.-SE.-WSW.-W.

American S. S. *Schenectady*:

Gale began on the 7th, wind SW. Lowest barometer 28.28 inches at midnight on the 7th, wind SW. 6, in latitude 51° N., longitude 19° W. End on the 8th, wind WSW. Highest force of wind 12, NW.; shifts SW.-W.-NW.

Honduran S. S. *Yoro*:

Gale began on the 5th, wind NNW. Lowest barometer 30.17 inches at 5:30 a. m. on the 5th, wind NNW., in latitude 21° 06' N., longitude 94° 50' W. End on the 6th, wind N. Highest force of wind 10; shifts NW.-NNW.

From the 8th to the 12th an area of low pressure remained nearly stationary off the coast of Great Britain, causing turbulent conditions over a large part of the middle and eastern sections of the ocean. On the 12th storm logs were received from vessels in the vicinity of the Azores and Madeira, as well as from the region between the 60th meridian and American coast.

Storm log:

French S. S. *La Bourdonnais*:

Gale began on the 9th, wind W. Lowest barometer 29.14 inches at 7 p. m. on the 9th, wind W., in latitude 47° 40' N., longitude 31° 41' W. End on the 12th, wind N. Highest force of wind 12, W.; shifts W.-NW.-N.

From the 13th to 15th an area of low pressure covered the middle and eastern sections of the steamer lanes, attended by gales of hurricane force, while on the 15th there was a second Low in the vicinity of Newfoundland, the two storm areas nearly meeting in mid-ocean, leaving only a narrow belt of comparatively moderate winds between the 35th and 40th meridians. Storm logs:

French S. S. *La Bourdonnais*:

Gale began on the 13th, wind W. Lowest barometer 29.37 inches at 4 p. m. on the 13th, wind W., in latitude 46° 20' N., longitude 38° 45' W. End on the 15th, wind WNW. Highest force of wind 12, W.; shifts W.-WNW.

British S. S. *Steadfast*:

Gale began on the 12th, wind SW. 7. Lowest barometer 29.25 inches at 8 p. m. on the 14th, wind NW. 11, in latitude 48° 20' N., longitude 32° 15' W. End on the 15th, wind NNW. Highest force of wind 11, NW.; shifts SW.-W.-NW.

On the 16th the western Low was central near latitude 47° N., longitude 35° W., and continuing in its easterly movement reached the British coast on the 19th. On the 18th Newfoundland was again surrounded by a moderate depression which gained in intensity as it moved north-eastward. On the 17th and 18th vessels in the region between the 25th and 35th parallels and 35th and 50th meridians reported northerly winds, force 7-9, with barometric readings ranging from 29.90 to 30.10 inches.

From the 19th to the 25th there was apparently an area of low pressure over mid-ocean, central north of the 45th parallel, the storm area expanding and contracting from day to day, reaching as far south as the 30th parallel on the 20th. Storm logs:

British S. S. *Slavic Prince*:

Gale began on the 15th, wind SSW. Lowest barometer 29.25 inches at 6 a. m. on the 16th, wind NW. 12, in latitude 43° 14' N., longitude 44° 45' W. End on the 17th, wind N. Highest force of wind 12, NNW.; shifts NW.-NNW.-N.

American S. S. *West Campgaw*:

Gale began on the 19th, wind WNW. Lowest barometer 29.29 inches at 6 a. m. on the 19th, wind NW. 10, in latitude 46° 35' N., longitude 40° 10' W. End on the 20th, wind W. Highest force of wind 10; steady NW.

Dutch S. S. *Nickerie*:

Gale began on the 19th, wind S. Lowest barometer 29.74 inches at 7 a. m. on the 20th, wind SSE., in latitude 29° 11' N., longitude 23° W. End on the 20th, wind SW. Highest force of wind 9, S.; shifts S.-SSE.

On the 20th and 21st the second severe "norther" of the month occurred in the Gulf of Mexico; this reached its greatest intensity on the 21st, and the daily weather map for that date shows a barometric reading of 30.58 inches at Galveston and 29.92 inches at Swan Island. While the gradient between these two stations was not as steep as on the 6th, the force of the wind was apparently as high. The Greenwich mean noon observations from a number of vessels give northerly winds, force 7-9, with barometric readings ranging from 30.14 to 30.44 inches.

Storm log:**American S. S. *Pennsylvania*:**

Gale began on the 20th, wind NE. Lowest barometer 30.01 inches at 6 a. m. on the 20th, wind NE. 8, in latitude 23° 35' N., longitude 88° 20' W. End on the 22d, wind N. Highest force of wind 9, N.; shifts NE.-N.

On the 25th New York was near the center of a disturbance that moved northeastward, and on the 27th was central in the vicinity of St. Johns, Newfoundland; during this period gales were reported by vessels west of the 50th meridian, as shown by following storm log:

American S. S. *Lightburn*:

Gale began on the 25th, wind SW. Lowest barometer 29.45 inches at 7 a. m. on the 25th, wind SSW. 10, in latitude 39° 38' N., longitude 69° 54' W. End on the 27th, wind NW. Highest force of wind 10, SSW.; shifts 6 points.

On the 25th and 26th there was a shallow depression near latitude 35° N., longitude 35° W., with gales in the westerly quadrants. Storm log:

British S. S. *Bloomfield*:

Gale began on the 24th, wind ESE. Lowest barometer 29.86 inches at 2 p. m. on the 25th, wind W., in latitude 36° 10' N., longitude 36° 42' W. End on the 26th, wind NNW. Highest force of wind 9, NW.; shifts WNW.-NW.-NNW.

On the 29th and 30th an area of low pressure was evidently central somewhere in the vicinity of Iceland, although it was impossible to locate it accurately on account of lack of observations. On the 29th westerly to southerly gales swept the steamer lanes east of the 50th meridian, while by the 30th the storm area had contracted considerably.

On the 31st Bermuda was about 10° west of the center of a low, and vessels between the 45th and 60th meridians reported unusually heavy winds.

Storm log:**British S. S. *Caldy Light*:**

Gale began on the 30th, wind SE. Lowest barometer 29.60 inches at 3 p. m. on the 31st, wind SE. 10, in latitude 36° 04' N., longitude 51° 05' W. End on February 1, wind NW. Highest force of wind 10, SE.; shifts SSE.-S.-SW.

SOUTH ATLANTIC OCEAN.

By ALBERT J. McCURDY, Jr.

Weather reports received from vessels that were in the South Atlantic Ocean in January, 1924, indicate that stormy conditions prevailed off the coast of Brazil in the first and middle decades of the month.

The Dutch S. S. *Poeldijk*, Captain Yaski, proceeding from Rotterdam to Buenos Aires, encountered on January 8, while off the southern coast of Brazil, fresh to strong gales with overcast weather and rough seas.

Mr. P. Smit, observer, states that the lowest pressure observed was 756 mm. (29.76 inches), this occurring at 4 p. m. in 26° 40' S., 47° 41' W. The wind at the time was SSW., force 8, increasing at 1 p. m. to force 9, followed by a heavy rain shower. Gale ended on the 9th, wind SW.

On the same date the American S. S. *F. Q. Barstow*, Capt. H. Wallace, New York toward Buenos Aires, experienced a moderate gale with rough seas in 35° S., 54° 30' W. Observer H. C. Strong reports that the lowest pressure, 29.97 inches (corrected), was observed at 8:24 a. m., at which time the wind was SSW., force 7.

On January 9 a fresh gale was encountered by the Dutch S. S. *Bellatrix*, Capt. C. Spuy, Cardiff toward Buenos Aires. Second Officer A. Barendrecht reports that at 9:15 a. m., while in 22° 45' S., 41° 15' W., the barometric reading was 29.76 inches (corrected); wind S., force 5, increasing to a fresh gale after sunset. The lowest pressure observed was 29.47 inches (corrected). This occurred at 10 p. m. and was followed by a heavy thunderstorm. The weather cleared on the morning of the 10th.

On the 15th the American S. S. *Kenowis*, Capt. E. A. Schaefer, proceeding from Port Arthur to Montevideo, experienced winds of gale force off the southern coast of Brazil. Second Officer William McFaul reports rough northeast seas with overcast and squally weather. The lowest pressure, 29.81 inches (corrected), was observed at 8:43 a. m. 29° 20' S., 49° 10' W. The wind at this time was NE., force 7.

551.506 (265.2)

NORTH PACIFIC OCEAN.

By WILLIS E. HURD.

The weather over the North Pacific Ocean during January, 1924, exhibited wide extremes of intensity, as noticed by mariners during entire transoceanic voyages. On the one hand, Mr. C. H. Moen, observer and fourth officer on board the American S. S. *President Jefferson*, Capt. F. R. Nichols, Seattle to Yokohama from the 23d to the 31st of the month, has the following to remark:

This has been a most remarkable voyage. We made the run in 10 days and 5 hours, arriving in Yokohama over 12 hours ahead of schedule. It is rare to find no storm, no fog, and smooth seas for this time of the year. A few snow squalls were encountered, but they never lasted more than a few minutes at the most.

On the other hand is the record of strong gales to hurricane winds, and the violent seas which caused more than one stout vessel to heave to for hours at a time, awaiting an abatement of the storm.

The pressure system showed the Aleutian low to be existent throughout the month, although fluctuating considerably in area and intensity. The eastern North Pacific high seems to have been less well developed than usual, and persisted on few consecutive days. Two storms from low latitudes entered the area between Hawaii and California, and southward extensions of the Aleutian cyclone occupied much of the usual high pressure region during most of the last decade. However, at the close of the month the high was becoming well established along the 30th parallel to the eastward of the 160th meridian of west longitude. A strong anticyclone overlay northern Alaska from the 20th to the 25th.

In east longitudes high pressure prevailed over the China coast, and the northeast monsoon seems to have been active. No reports of typhoons are at hand. Greater storm activity, however, occurred in east than in west longitudes during January, and moderate to dangerous gales were of frequent occurrence over the